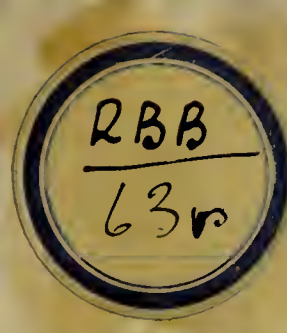


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SOUTH AUSTRALIA

ANNUAL REPORT

OF THE

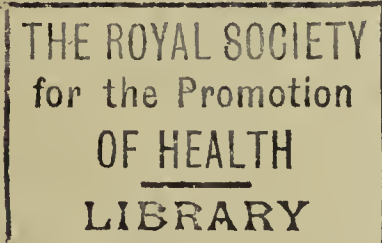
Department of Public Health

AND THE

Central Board of Health

FOR THE

Year ended 31st December, 1955



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1956

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THE PUBLIC HEALTH

Annual Report of the Department of Public Health and the Central Board of Health to the Minister of Health (Hon. Sir Alexander Lyell McEwin, K.B.E., M.L.C.)

SIR—We have the honour to submit to you this report for the year ending 31st December, 1955. The report is arranged in sections dealing with :—

1. Staff and administration.
2. Legislation.
3. Vital statistics.
4. Infectious diseases.
5. Poliomyelitis.
6. Tuberculosis.
7. School medical services.
8. General sanitation.
9. Food and drugs.
10. Industrial hygiene.
11. Summary and comments.

The section on vital statistics has been compiled by the Government Statist (Mr. A. W. Bowden) and his staff. Other sections have been prepared by officers of the Department of Public Health. The Director of Tuberculosis (Dr. P. S. Woodruff) was responsible for Section 6. The Principal Medical Officer for Schools (Dr. M. P. Casley Smith) supplied Section 7. The Poliomyelitis Medical Officer (Dr. R. R. Horton) prepared the section on poliomyelitis. The Senior Medical Officer (Dr. G. H. McQueen) has supervised the collection of the data for the report. He has been assisted by the Secretary (Mr. H. T. Hutchins) and his staff in the general work of the report.

1. STAFF AND ADMINISTRATION.

Personnel of the Board.—During the year the constitution of the Board was :—

Chairman—Albert Ray Southwood, M.D.

Members appointed by the Governor—

John Burton Cleland, M.D.

George Hugh McQueen, M.B., B.S.

Member elected by the metropolitan local boards—

Arthur Roy Burnell, J.P., re-elected February, 1955.

Member elected by other local boards—

Alfred Bertram Cox, J.P., re-elected February, 1955.

Secretary—Hedley Thomas Hutchins.

During the year Dr. P. S. Woodruff was re-appointed Director of Tuberculosis. Dr. Marjorie P. Casley Smith was appointed Principal Medical Officer for Schools following the retirement of Dr. W. Christie. Dr. D. J. Daly was appointed a temporary medical officer in April and he resigned in December. In the School Medical Service, Drs. S. H. Calder and P. I. Wilson were appointed full-time, and Drs. C. C. Dietmann and J. D. Seager part-time medical officers ; Drs. C. C. Dietmann, R. J. Harley and E. F. K. Mussared resigned. Dr. F. W. Seith and Mr. P. D. O'Leary, dentists, resigned, and Miss E. M. Freestun and Mr. G. Hardy were appointed full-time dentists.

Mr. D. J. Wilson was appointed Chief Inspector following the retirement of Mr. A. C. E. Woodsford who was later appointed a temporary inspector to carry out special duties relating to noxious trades and training newly appointed inspectors. Mr. M. D. Hall was acting Chief Inspector before Mr. Wilson's appointment. Messrs. O. D. Inglis, B. J. Plew, and R. C. Rogers were appointed inspectors under the Health Act and the Food and Drugs Act. These officers filled two new positions created during 1954 and a vacant position resulting from Mr. P. G. Rehn's resignation.

Misses J. Hicks, E. V. Manning and G. J. Smith joined the staff as public health nurses and Misses N. C. Cahill, H. M. Clarke, and E. V. Manning resigned from nursing posts. The following officers were appointed to positions on the clerical staff—Messrs. M. N. Burford, D. J. Coombe, and S. R. Stevenson ; Misses J. Ashcroft, M. B. McDade, B. H. Sorrell, P. E. Storer, C. E. Warncken, and E. J. Williams. The following resigned or were transferred—Mr. N. L. Denny, Misses R. E. Daly, M. A. Hoadley, P. E. Storer, E. E. Wray, and M. E. Young. Mr. H. W. Supple resigned from the position of radiographer and Mr. N. J. White was appointed to the post.

Public Health Conference.—A Public Health Conference arranged by the Department was held at the Institute of Medical and Veterinary Science on 27th-28th October, and was well attended by representatives of Local Boards. The programme was arranged largely in accordance with items submitted by local boards for discussion. Besides members and officers of local boards, members of other bodies and other persons interested in various aspects of public health attended. The Conference was opened by the Hon. Sir Lyell McEwin, K.B.E., M.L.C., Minister of Health. The subjects discussed were :—The Nurse, the Social Worker, and the Almoner in Public Health ; the Application of Bacteriology to Public Health ; Small Domestic Sewage Disposal Systems ; and Refuse Disposal. A symposium on Public Health Administration concluded the Conference.

National Health Week, 1955.—This year National Health Week was from 14th-22nd October. Short paragraphs dealing with health subjects suitable for publication in local newspapers, circulars, and pamphlets were sent to local boards to assist them in featuring Health Week within their own districts.

Circulars.—Central Board circulars and newsletters sent to local boards dealt with septic tank installation, Public Health Conference, hospital registers, Food and Drugs Regulations, caravan parks, National Health Week, controlled tipping and poliomyelitis vaccine.

“Good Health.”—Quarterly issues of “Good Health” were published. The first issue featured the work of the nursing profession in public health. The second issue dealt extensively with infectious diseases and their control, and made special reference to amendments to the Health Act and Regulations. The third issue contained the report of the Director-General of Public Health on his visit during 1954 to Europe and America. The fourth issue contained information about the Public Health Conference, noxious trades appeals, and water conservation in South Australia.

National Health and Medical Research Council and Committees.—Two Sessions of the Council and two meetings of the Public Health Committee were attended by Dr. Southwood, the first Session and meeting in May, the second Session and meeting in November. The Senior Medical Officer (Dr. McQueen) attended two meetings of the Industrial Hygiene Committee, the first in Melbourne during March and the second in Sydney during August. The Poliomyelitis Medical Officer (Dr. Horton) attended a meeting of the Poliomyelitis Committee in Melbourne at the Commonwealth Serum Laboratories during August. Meetings of the Poisons Schedules Committee held in Melbourne during January and November were attended by Mr. R. C. McCarthy, Pharmaceutical Inspector.

Australasian Medical Congress.—The Ninth Australasian Medical Congress was attended by Drs. Deland, McQueen and Woodruff in Sydney during August. They presented papers on public health subjects.

First Australian Seminar on Health Education.—Dr. M. P. Casley Smith, Principal Medical Officer for Schools, and Dr. H. F. Hustler attended the Seminar on Health Education held in Canberra during January as representatives of the Department of Public Health. Other South Australian members of the Seminar were Mr. M. J. Gerlach (Education Department), Dr. C. Jungfer (South Australian Branch, British Medical Association), and Mrs. A. G. Wheaton (University of Adelaide).

National Tuberculosis Advisory Council.—The Seventh Session of the National Tuberculosis Advisory Committee was held at the University of Sydney during August and attended by Dr. Woodruff.

Asian-Pacific Tuberculosis Conference.—The Asian-Pacific Tuberculosis Conference was held in Sydney from 15th to 21st August, 1955, and was attended by Dr. Woodruff.

Home-Nursing and Home-Help Service.—With the object of investigating the possibility of relieving the congestion of hospitals and institutions, and reducing the ever-increasing expense associated with illness and the care of the aged, a survey of home-nursing and home-help services was made.

Attention was centred mainly upon elderly persons. Individuals occupying hospital beds were matched against similar ones being cared for in private dwellings. The problems are involved. It was found that about one-half of the elderly patients now occupying hospital beds were there for social rather than medical reasons. The majority of the patients said that they would prefer to be cared for in their own homes. Lack of home-help appears to be a greater factor than lack of home-nursing in causing elderly patients to be admitted to hospitals.

There are several voluntary organisations and one State agency concerned with supplying home-help in special circumstances. A comprehensive scheme would be a complicated undertaking. It might include health education, health visiting and assessment of home environments by an extension of hospital almoner services. Further investigation of economics and staffing aspects of such a scheme would be necessary.

Special thanks are due to members of the District and Bush Nursing Association, the Hospitals Department, Children's Welfare and Public Relief Department, and Dr. A. W. Meadows of the University of Adelaide who assisted in planning the survey.

Index of organisations dealing with the handicapped.—A combined undertaking between the S.A. Council of Social Service and the Department to produce a comprehensive directory of all official and voluntary agencies in South Australia dealing with the physically, mentally and socially handicapped is under way. It is not generally realised that there are over 200 organisations in South Australia associated with that class of work. The directory will be published as an issue of “Good Health.” It should be extremely useful to all concerned with social welfare.

Non-Affiliated Kindergartens and Child Minding Establishments.—An investigation of these establishments in the metropolitan area was conducted by officers of the Department, in conjunction with the Children's Welfare and Public Relief Department.

Although most non-affiliated kindergartens do not conform strictly with the rules laid down by the Kindergarten Union of S.A. Incorporated, the general standard is reasonably good and the proprietors are giving a useful service to the community.

In present-day society many mothers of young children are working outside their homes. The pursuit of higher living standards is by no means the only motive. Some are forced by circumstances to support themselves and their children. Consequently to meet the need many privately conducted child-minding establishments have arisen in the suburbs. Though the standards in the majority of cases are reasonably satisfactory, some are poor. Supervision is desirable.

Legislation relating to the registration of all types of institutions that care for children is being investigated.

Overcrowding in Homes.—During the year the Hindmarsh Local Board of Health raised the question of overcrowding in dwellings, instancing some cases in its area. The Health Act, Section 119, covers this in general terms but lays down no precise standard. Legislation in force in other States was considered and the Central Board decided to issue a ruling.

The ruling since given is :—

No sleeping room in any house shall be occupied by such a number of inmates that for every inmate 12 years and over there is less than 400 cubic feet of air space, and for every inmate under the age of 12 years there is less than 250 cubic feet of air space.

Prosecutions by Police Officers.—The areas of some local boards, more particularly on Eyre Peninsula, are a considerable distance from the nearest resident practising solicitor. The Commissioner of Police has no objection to those members of the Police Force, who are also Clerks of Courts, assisting the local boards of health in prosecutions in remote areas where no practising solicitor is available within 50 miles. This arrangement is restricted to prosecutions under the Health Act or the Food and Drugs Act.

Compulsory installation of bacteriolytic tanks.—Section 528 of the Local Government Act, 1934-1954, empowers a Council to require that all buildings within the area, or part thereof, shall be provided with bacteriolytic tanks for the disposal of sewage. This provision was amended in 1954 to provide that the Council must first obtain the approval of the Central Board of Health to any such proposal before the resolution is made and that any such resolution shall, together with the approval of the Central Board of Health to the passing of the resolution, be published in the *Government Gazette*. Six Councils have sought approval to require the compulsory installation of septic tanks in their areas or portion of their areas. In each case, the Central Board of Health, after making inquiries has formed the opinion that the areas were suitable for the installation of bacteriolytic or septic tanks. Now with the adoption of modified septic tanks there are few, if any, places in the State which would not be suitable for bacteriolytic tanks.

Noxious Trades.—In 1954, the Local Board of Health for Woodville refused to issue licences under the Noxious Trades Act, 1943, to W. Angliss & Co. (Aust.) Pty., Ltd., and to Crompton & Sons Ltd., to carry on noxious trades at Albert Park and Beverley respectively. Appeals under section 12 of the Act were received from both firms. The grounds for the refusal of the licences by the Local Board were in respect of the sites of the premises and non-compliance with regulations. The Local Board of Health of Hindmarsh also refused to issue licences to S. E. Antonas and Avenues Tannery Ltd. in respect of premises in that area. These firms also appealed.

An appeal was also received from Wooltana Industries Ltd. against the refusal of the Local Board of Health for Enfield to grant a licence. The premises of the firm are situated within the declared noxious trades area. The appeal was withdrawn and a licence issued when the structural matters requiring attention were completed.

In all cases the noxious trades had been carried on at the premises concerned for many years. The Central Board, after hearing the appeals, dismissed them all. In giving its decisions the Board indicated that it considered the Local Boards were wrong in refusing to give licences because the areas surrounding the places where the noxious trades were carried on had become residential areas. The Board also considered that Regulations 24, 25 and 26, made under the Noxious Trades Act should have been used before refusing to give the licences and that licences should be granted when the premises concerned complied with the requirements of the Act and Regulations.

2. LEGISLATION.

Health Act.—Further amendments were made to the Health Act during 1955. Provision was included to enable regulations to be made in respect of notifiable diseases as well as infectious diseases. Power was given to prescribe qualifications for persons employed as health inspectors, the examination of such persons and providing that after a day fixed in the regulation no person shall be employed as a health inspector who is not certificated. This, however, would not affect any inspector who held office at the time the regulation comes into force.

It was made an offence for any person to manufacture a septic tank not of the size or construction approved by the Central Board of Health. The time limit in which proceedings might be commenced for any breach of the Act relating to septic tanks was increased from six to twelve months.

Noxious Trades Act.—Various amendments were made to the Noxious Trades Act following the hearing by the Central Board of appeals against the refusal of local boards to issue licences to carry on noxious trades. The Act now permits extensions on the land outside proclaimed areas on which noxious trades were being carried on at the time the Act came into force in 1949. In regard to expenses in event of compulsory removal the Supreme Court shall not have regard to any building or other structure erected after the time the Act came into force. During the interval of time between the refusal of a local board to grant a licence and the decision of the Central Board on the hearing of the appeal the trade may now be continued until the Board's decision is delivered.

Dangerous Drugs Act Amendment.—The Dangerous Drugs Act, 1934, was amended to give power to prohibit the possession and use of any specified drug. The amendment provides the machinery to bring into effect the prohibition on the use of heroin recommended by the World Health Organisation.

Other amendments gave power to include other drugs in the Codeine and Dionine group; the offence of obtaining drugs from several doctors at the same time was clarified; the prohibition on the cultivation of the opium poppy was extended to include Indian Hemp and the Coca bush and powers of seizure were given to authorised officers. In the original Act power was given to withdraw any licence or authority; an amendment now provides for power to restore any licence or authority by the Minister on the recommendation of the Central Board.

Food and Drugs Act.—Various amendments were made to the Food and Drugs regulations. These included the prohibition of food shops being used as agencies for the receipt of dry cleaning ; requirements for the washing of glasses and cutlery in hotels, restaurants and other places where these utensils are used in common ; fixing the standard for margarine and for reconstituted milk and the moisture content of processed cheese ; and prohibiting the use of certain systemic organic phosphates. The regulation relating to sausage was amended to enable certain of these small goods to be prepared in accordance with continental recipes. A new standard was prescribed in respect of mixed cream of tartar and acid phosphate. Labelling amendments related to unsweetened condensed skim or separated milk ; dried skim milk or dried separated milk ; antibiotics and certain poisons. A new list of permitted colouring matters replaced the previous list and the use of coumarin was prohibited. The amendments concerning labelling, food colours and coumarin do not come into force until twelve months after publication in the Government Gazette.

The standard for reconstituted milk gave rise to considerable discussion particularly in the possible economical effect of the sale of reconstituted milk in the metropolitan area. The attitude of the Board was that reconstituted milk is a wholesome article of food and any action for restriction on its sale should not be made a function of the Department. The Metropolitan Milk Supply Act was subsequently amended to give power over the sale of reconstituted milk within the area to which the Act applies.

Bread Act, 1954.—The Bread Act, 1954, repealed the Bread Act, 1936. Among other matters it relates to the appointment of inspectors and their powers, “dough weight” bread, dry matter in bread, and application of Weights and Measures Act to dough weighing machines.

The question arose as to the Department which should administer this Act—Factories and Steam Boilers, Highways and Local Government, or Public Health. It was pointed out that the Public Health Department already administered the Food and Drugs Act under which standards are prescribed for various breads and also the Bakehouse Registration Act. Under these Acts and the Health Act inspectors of this Department and inspectors of local boards already have supervision over bread standards and manufacture. The Food and Drugs Act further provides that every inspector appointed under that Act shall have all the powers and authority of an Inspector under the Bread Act.

Though the Bread Act, 1954, contains no provisions of a direct public health nature it is reasonable that this Act should be administered by the authorities concerned in other aspects of bread production. The administration of the Act was committed to the Honourable the Minister of Health.

Legal Proceedings.—Legal proceedings were taken by the Central Board of Health, and by local boards of health following reports by officers of the Central Board, in respect of the following offences :—

Food premises—	
Not kept clean	3
Appliances not kept clean	3
Not protected from rats	3
Meat—Small goods not to standard	35
Milk—Not to standard	11
Slaughterhouses—	
Swine fed on raw offal	13
Dog unchained when not being used for yarding purposes	6
Dead animals causing offensiveness.....	4
In an offensive condition.....	10
Dirty tools of trade	1
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3. VITAL STATISTICS.

The following figures have been supplied by the Government Statist ; they are subject to slight revision. Particulars for 1954 are in parentheses.

Population.—The estimated mean population for the State for 1955 was 820,000 (796,361).

Births Registered.—The number of births registered was 18,494 (18,277). The last six years have been successive records in numbers, increasing from 16,042 in 1949. The highest birth rate per 1,000 of population in recent years was 25·23 in 1947, and has now fallen to 22·55 (22·89).

Sexes of Births.—The number of boys compared with 100 girls born does not vary greatly. In 1955 it was 106·20.

Adoptions.—403 (423) children were legally adopted during the year.

Deaths Registered.—7,536 (7,179) an increase of 357 on the previous year and 352 more than the previous record total for 1951, the rate being 9·19 (9·01).

Infantile Mortality.—Deaths of children under 1 year were 431 (388). The infantile death rate, or the number of deaths of children under 1 year per 1,000 births during the year of calculation was 23·30 (21·29). This rate is higher than that of the three previous years, but is still one of the lowest in the world.

There were 109 (125) deaths of children under one day, 152 (152) of children from one day to one month, and 170 (111) from one month but under one year. Compared with earlier years there has been a distinct decrease in the death rate of children under one month but a far greater decrease in respect of children from one month and under one year, although there has been an increase in the latter group for 1955.

Deaths of infants from certain causes for 1955 (1954) have been :—Diarrhoea, 24 (12) ; congenital malformations, 81 (74) ; prematurity, 90 (84) ; injury at birth, 38 (42) ; other diseases peculiar to early infancy, 82 (85) ; cerebrospinal meningitis, 1 (6) ; meningitis, 4 (3) ; whooping cough, 2 (1) ; pneumonia, 54 (45) ; hernia and intestinal obstruction, 5 (7) ; external causes, 18 (6) ; and all other causes, 32 (23).

The causes for which there were large increases in the age group one month and under one year were :—Diarrhoea, 23 (12); congenital malformations, 35 (24); other diseases peculiar to early infancy, 9 (4); pneumonia, 46 (33); external causes, 17 (6); and all other causes, 40 (32).

Still Births.—These are not included in either births or deaths and they number 271 (254).

Marriages.—The number of marriages celebrated was 6,226 (6,190) and the rate per 1,000 of population was 7.59 (7.77).

4. INFECTIOUS DISEASES.

Statistics.—Infectious diseases notified and deaths from infectious diseases during 1953 and 1954 are shown in Table I for comparison with 1955.

Infectious diseases notified and deaths from infectious diseases during 1955 are shown in Table II and notifiable diseases notified and deaths from these diseases in 1955 in Table III. Influenza becomes notifiable only when it occurs in epidemic form, but all deaths from influenza are recorded.

TABLE I.

Infectious Diseases.	Cases.		Deaths.	
	1953.	1954.	1953.	1954.
Ancylostomiasis	—	1	—	—
Brucellosis	1	1	—	—
Diphtheria	6	5	1	—
Dysentery—				
(a) Amoebic	3	3	—	—
(b) Bacillary	164	17	1	2
Encephalitis	23	26	4	3
Endemic typhus fever	3	7	—	—
Erysipelas	13	12	—	—
Erythema nodosum	1	2	—	—
Infantile infective diarrhoea	—	4	—	—
Influenza	383	368	3	20
Measles	1,573	6,264	2	1
Meningococcal infection	17	22	5	4
Paratyphoid fever	—	2	—	—
Poliomyelitis	398	176	21	5
Psittacosis	—	3	—	—
Puerperal pyrexia	3	2	—	—
Scarlet fever	157	224	1	—
Tuberculosis—				
(a) Pulmonary	362	287	40	61
(b) Other forms	28	21	5	7
Typhoid fever	11	7	—	—
Whooping cough	279	295	2	1

TABLE II.

Infectious Diseases.	Second Schedule.	
	Cases.	Deaths.
	1955.	1955.
Acute infective encephalitis	5	3
Amoebiasis	1	1
Ancylostomiasis	1	—
Diphtheria	26	3
Diarrhoea, infantile infective	7	—
Dysentery, bacillary	63	4
Influenza in epidemic form	—	2
Meningococcal infection	10	5
Poliomyelitis	182	6
Puerperal pyrexia	1	—
Salmonella infection	4	1
Scarlet fever	289	—
Typhoid fever	1	—

TABLE III.

Notifiable Diseases.	Third Schedule.	
	Cases.	Deaths.
	1955.	1955.
Acute rheumatism	16	1
Brucellosis	3	—
Chorea	1	—
Erythema nodosum	6	—
Encephalitis following another disease	24	1
Hydatid disease	—	1
Infective hepatitis	502	5
Lead poisoning	3	1
Rubella	179	1
Tetanus	5	6
Typhus, flea borne	1	—

Diphtheria.—Twenty-six cases were reported during the year. There were three deaths. There was no real epidemic, though more than one child in a family was affected in several cases. It was not possible to find out exactly in every case whether a child had been immunized, but all the deaths were in non-immunised persons. Of the seven immunised, all were mild cases and in each instance the immunization took place two or more years before and no “booster” had been given. The increase marks the need for universal immunization.

Ancylostomiasis.—One case was reported, undoubtedly infected elsewhere. There is little chance of this disease becoming established here.

Amoebiasis.—An unusual case occurred in a child ; *Entamoeba histolytica* was found in the cerebro-spinal fluid.

Brucellosis.—Three cases were reported. *Br. abortus* is by no means uncommon in cattle in South Australia and they are the source of the occasional human case. One case was a relapse of *Br. melitensis* acquired in Malta ; there was no spread of this type which was previously unknown in Australia.

Bacillary Dysentery and Salmonella infections.—There is much confusion in the diagnosis of these diseases and many cases are notified in which the exact causative organism has not been identified. The recurrence of these diseases is a reflection of sanitary practice but modern treatment has greatly reduced both their morbidity and mortality.

Infective Hepatitis.—This disease, made notifiable during the year, is very widespread, as can be seen from the table. It is hoped that notification may throw further light on its epidemiology.

Typhoid Fever.—One new case of this disease was reported during the year. This was the mother of a previous case and showed the same type of organism (Type C). Possible clues to the source of infection were followed up but no information was produced. This case was discovered early in the year and no further case has been reported since from anywhere in the State.

Immunization.—Prophylaxis against diphtheria, whooping cough and tetanus has been continued by local boards, and by the Department’s officers outside local government areas. Coober Pedy and Ernabella were again visited and immunization courses completed. Excellent co-operation has been given by the Royal Flying Doctor Service, the Bush Church Aid Society and local medical practitioners at Leigh Creek and Woomera. The use of triple vaccine is becoming almost routine. Immunization by local boards and private practitioners is almost complete in many areas, but in a few it lapses at times. There is an organised minority group in the State that opposes immunization on religious grounds. This was probably responsible for one outbreak of diphtheria near a northern country town.

5. POLIOMYELITIS.

Statistics.—The number of cases (182) of poliomyelitis reported for the year ended 31st December, 1955, approximated the number reported in the year 1954 (176). The cases were distributed fairly evenly over the year ; there were six deaths compared with five in 1954. It appears now that the epidemic which commenced in 1949 has ceased and cases are occurring at an endemic level rather than an epidemic one. The yearly figures since the epidemic commenced in May, 1949, appear in Table IV.

TABLE IV.

Year.	Cases.			Deaths.		
	Total.	Metropolitan Area.	Other Districts.	Total.	Metropolitan Area.	Other Districts.
1949.....	580	490	90	20	15	5
1950.....	973	816	157	17	7	10
1951.....	1,491	1,012	479	62	39	23
1952.....	709	435	274	12	7	5
1953.....	398	287	111	21	11	10
1954.....	176	123	53	5	2	3
1955.....	182	110	72	6	5	1
	4,509	3,273	1,236	143	86	57

Rehabilitation.—The after-care work discussed in the last annual report has been continued. More visits were made to country areas than was possible in 1954. Some of the assistance which was given to post poliomyelitis patients was made possible by the co-operation of voluntary agencies such as Crippled Children’s Association and the Red Cross Society. The Crippled Children’s Association’s almoner and physiotherapist regularly visited country centres and on several occasions they were accompanied by the Poliomyelitis Medical Officer. The Handcrafts Section of the Red Cross Society has met all requests from the Poliomyelitis Medical Officer for metropolitan patients (particularly married women) to be taught handcrafts in the home. In some country centres members of the Country Women’s Association in a voluntary capacity have undertaken similar assistance.

Conferences.—In August, the Poliomyelitis Medical Officer attended an Australia-wide social work conference in Melbourne. Psychological problems of physically handicapped people were discussed. In November there was a meeting of the Poliomyelitis Committee of the National Health and Medical Research Council and this, too, was attended by the Poliomyelitis Medical Officer. It was an important meeting as it was decided there to recommend the use of poliomyelitis vaccine (Salk) in each State to reduce the incidence of paralytic poliomyelitis.

Poliomyelitis Vaccine.—This is to be manufactured in Australia by the Commonwealth Serum Laboratories, Melbourne. The vaccine is designed to protect against all the three known types of poliomyelitis infection. The vaccine will be allocated by the Commonwealth on a per capita basis to the States who will be responsible for their own immunization programme. It is Commonwealth policy that, for the present, issue and use of the vaccine will be restricted to the State authorities.

There are numerous difficulties in arranging the mass immunization programme. Detailed records will be essential to provide personal records of subjects vaccinated and to permit later statistical analysis. The vaccine is expensive and difficult to make in large amounts. It has to be refrigerated at prescribed temperatures and must be used within a month of receipt from the Laboratories. Because of these problems it was decided that the most practical and economical way to do the immunization on a mass scale was by using a central records staff with full-time medical officers working in properly equipped mobile units. The Government of South Australia has authorized the purchase of four caravans equipped with refrigerators and sterilizers. Each will be staffed by a doctor and assistants who will travel round the State giving the injections at the schools. Private schools will be included in the programme. It is anticipated that the injections will commence here in June, 1956, and this State's quota will be 36,000 injections every four weeks.

To cope with both the proposed immunization and the present post care work a specific branch, known as the "Poliomyelitis Services," has been set up within the Department of Public Health. Its officers will be accommodated in a two storey building at Beulah Road, Norwood. Poliomyelitis has taken a heavy toll in South Australia in the past and the availability of the vaccine will be welcomed in this State.

6. TUBERCULOSIS.

New Notifications.—During the year under review, 326 new cases of tuberculosis were notified. Pulmonary cases numbered 297, and in 29 the disease was reported in other sites.

The Table V shows notifications for the past four years. The downward trend was interrupted in 1955, but only to a minor degree.

TABLE V.—TUBERCULOSIS NOTIFICATIONS.

Year.	Pulmonary Cases.	Other Cases.	Total.
1952.....	385	30	415
1953.....	365	25	390
1954.....	291	21	312
1955.....	297	29	326

The age and sex incidence of new cases of tuberculosis in 1955 is indicated in Table VI.

TABLE VI.—NEW NOTIFICATIONS OF TUBERCULOSIS BY AGE AND SEX—1955.

Age Group.	Males.	Females.	Total.
0- 4 years	8	10	18
5-14 years	9	7	16
15-24 years	18	32	50
25-34 years	29	31	60
35-44 years	41	23	64
45-54 years	40	15	55
55-64 years	28	6	34
Over 65 years	23	6	29
Totals	196	130	326

Tuberculosis is becoming increasingly a disease of middle-aged and elderly males, though the incidence in adolescent girls and young women remains distressingly high.

The distribution of new cases throughout the State shows a number of interesting features. 225 cases were reported from the metropolitan area, and 101 from the country. Table VII shows the distribution by Local Boards of Health areas.

TABLE VII.—NEW NOTIFICATIONS OF TUBERCULOSIS, BY LOCAL BOARDS OF HEALTH AREAS.

METROPOLITAN AREA.		COUNTRY AREAS :	
Local Board of Health—	Notifications.	Local Board of Health—	Notifications.
Woodville	32	Port Augusta	6
Adelaide	22	Whyalla	6
Port Adelaide	18	Yorke Peninsula	6
Enfield	16	Port Pirie	4
Glenelg	16	Stirling	4
Unley	16	Berri	3
Marion	15	Gawler	3
Burnside	14*	Morgan	3
Hindmarsh	12	Murat Bay	3
West Torrens	11	Port Lincoln	3
Kensington and Norwood	8	Balaklava	2
Mitcham	8	Mannum	2
Thebarton	8	Moonta	2
Campbelltown	6	Mount Barker	2
Prospect	5	Mount Gambier	2
St. Peters	5	Naracoorte District.....	2
Payneham	4	Naracoorte Town	2
Henley and Grange.....	3	Port Elliot	2
		Salisbury	2

*Not including six cases notified from Parkside Mental Hospital.

COUNTRY AREAS—continued.		COUNTRY AREAS—continued.	
Local Board of Health—	Notifications.	Local Board of Health—	Notifications.
Snowtown.....	2	Millicent	1
Waikerie	2	Murray Bridge	1
Yorketown	2	Noarlunga	1
Carrieton	1	Onkaparinga	1
Clinton ...	1	Penola	1
Kadina District	1	Renmark	1
Kadina Town.....	1	Spalding	1
Keyneton and Swan Reach	1	Tanunda	1
Lacepede	1	Tatiara	1
Lameroo	1	Tea Tree Gully	1
Le Hunte	1	Victor Harbour	1
Mallala	1	Warooka	1
Meningie	1	Out-Districts	6

In addition, five cases resident in the Northern Territory, and three cases resident in Broken Hill, New South Wales, were notified from hospitals in Adelaide.

It is worthy to note that, in the metropolitan area, no new cases were reported from Brighton, Colonel Light Gardens, or Walkerville, and that this is Walkerville's second successive year without a new case of tuberculosis.

Migrants.—The incidence of tuberculosis among migrants has given rise to some comment. During the year, 30 new cases of tuberculosis were reported among migrants in South Australia who had arrived in Australia in the five years prior to notification. Of these, 11 came from the United Kingdom and 19 from other countries. They represent 9·2 per cent of the year's notifications, and this is roughly equivalent to the proportion of migrants of less than five years' standing in the community.

Tuberculosis Allowances.—At the beginning of the year, 499 persons were receiving Tuberculosis Allowances. During the year, allowances were granted to 235 persons and 268 allowances were cancelled. At the end of the year, 466 persons were receiving allowances, a decrease of 33 for the year.

Mortality.—Fifty deaths from tuberculosis were reported during the year, compared with 63 in the previous year. While the number of deaths was higher than the record low figure reported in 1953, the deathrate of 6·1 per 100,000 of population was, owing to increasing population, exactly equal to 1953's record low deathrate.

TABLE VIII.—DEATHS FROM TUBERCULOSIS, BY AGE AND SEX.

Age Group.	Males.	Females.	Total.
0- 4 years	1	4	5
5-14 years	—	—	—
15-24 years	1	1	2
25-34 years	—	2	2
35-44 years	5	4	9
45-54 years	7	—	7
55-64 years	6	6	12
65 and over	11	2	13
Totals	31	19	50

It will be seen from Table VIII that deaths from tuberculosis are almost twice as frequent in males as in females, and that half the deaths occurred in persons over 55 years of age.

All cases except one had been previously notified during life as suffering from tuberculosis, i.e. two per cent of deaths, or 0·3 per cent of cases, were first notified at death.

X-ray Surveys.—Two large surveys were made in the metropolitan area during the year, in part of Woodville and in Glandore. In the country, the areas covered included Yorke Peninsula, the far North from Peterborough to Blinman, and the Broken Hill line, including Leigh Creek and Radium Hill. Fifty thousand, nine hundred and eight-two persons were examined during the year, 33,245 in the metropolitan area, and 17,737 in the country.

An assessment has been made of the results of 174,000 compulsory X-ray examinations in the three-year period March, 1952-March, 1955. One hundred and twenty-four new cases of tuberculosis were discovered as a result of these examinations. At the time of assessment, 50 of these persons had been treated and observed for longer than 18 months. Of these, 39, or 78 per cent, had completed treatment and returned to full-time occupations.

Tuberculin Testing and BCG Vaccination.—Tuberculin testing of school children and National Service trainees continued throughout the year. Only Seventh Grade school children are examined in the metropolitan area, but in country areas the whole school population is offered the test, because of less frequent visits to each centre. Those positive to tuberculin are referred for X-ray examinations, and the non-reactors in the age-group approaching adolescence are offered BCG vaccination. Country areas visited in 1955 contained fewer major centres of population than in 1954. For this reason, the numbers of children examined are smaller.

Three cases of pulmonary tuberculosis occurred among aboriginal natives in the Coober Pedy area in the middle of the year. A special Survey was therefore undertaken with the help of the Aborigines' Department, and the staff of the Long Range Weapons Establishment, Woomera. One hundred and ten natives were tuberculin-tested in the vicinity of Coober Pedy. The non-reactors (except three aged persons) were vaccinated with BCG and the positive reactors were conveyed to Woomera Hospital for X-ray examination. Table IX shows the results of this programme.

TABLE IX.—TUBERCULIN TESTING AND BCG VACCINATION OF SCHOOL CHILDREN AND NATIONAL SERVICE TRAINEES, 1955.

Group.	Number Tested.	Natural Positives.	Percentage Natural Positives.	Previous BCG	Non-Reactors.	BCG Given.
School children : Australian born	5,148	251	4·9	18	4,879	4,577
School children : Migrants	591	94	15·9	42	455	
National Service Trainees	2,424	473	19·5	101	1,850	1,840
Aboriginal natives (all ages)	110	34	31·0	Nil.	76	73

7. SCHOOL MEDICAL SERVICES.

Staff.—At the end of the year the School Medical Services consisted of the Principal Medical Officer, four full-time and two part-time medical officers, three dentists, seven nurses and two dental assistants. During the year the Senior Dentist, Dr. Seith, resigned after 10 years in the Department. and Mr. Kranz was granted leave of absence to visit England.

Examinations.—The year 1955 was a satisfactory one in many respects. Despite changes in personnel, the numbers of children examined over the year increased from 26,482 in 1954 to 35,359. The school attendance in 1955 was 126,847. One hundred and thirty-seven schools were visited during the yaer. Defect notices issued to children are shown in Table X, calculated per 10,000 children examined, making possible a comparison with other years. Table XI summarizes the work.

TABLE X.—DEFECT NOTICES ISSUED PER 10,000 CHILDREN EXAMINED.

Year.	Vision.	Hearing.	Nose and Throat.	Teeth.	Heart.
1950	525	147	744	4,102	81
1951	599	202	739	4,784	55
1952	693	200	689	4,439	40
1953	676	168	514	4,466	46
1954	646	272	355	3,769	43
1955	691	252	256	3,136	38

TABLE XI.—NUMBERS OF SCHOOLS AND CHILDREN.

	Metropolitan.	Country.	Total.
Schools visited	76	61	137
Children examined	31,290	4,069	35,359
Defect notices sent—			
Vision	1,890	255	2,145
Hearing	676	208	884
Nose and throat	735	161	896
Teeth	9,221	1,867	11,088
Heart	115	22	137
Skin	395	59	454
Lungs	58	9	67

During the year a pilot scheme for the examination of school children by the nearest resident doctor was introduced at Port Lincoln, Cowell, and Tumby Bay. The children from the surrounding smaller schools were brought in to the main school by arrangement. Unfortunately the doctors at Port Lincoln found themselves unable to carry out the work, but 398 children were examined at Cowell and Tumby Bay. It is hoped to proceed further with the scheme. It is obvious that a larger staff is necessary for all the schools to be visited yearly so that all the children can be examined regularly in the stated grades.

The follow-up work by the nurses was continued at the schools during the year. Seventy-three per cent of the children had received the attention advised by the Medical Officers. Where nothing had been done, further notices were sent to the parents or the parents were interviewed. A few cases where need existed were visited by the Social Workers of the Education Department. Some children were sent for psychological treatment, or were sent for holidays at the Junior Red Cross Home. Occasional speech defects were reported to the speech therapist.

Hearing defects.—Thirteen thousand eight hundred and ninety-nine children had pure tone audiometer tests in 128 schools and 686 defects were discovered—4·9 per cent. A further 321 attended at the office and 35 were finally fitted with hearing aids at the Commonwealth Acoustics Laboratory.

TABLE XII.

		Hearing Loss in Decibels—Right Ear.										
		0-9.	10-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80-89.	90 and upwards.	Total.
Hearing Loss in Decibels. Left Ear.	0- 9	2	6	11	8	2	1	—	—	—	1	31
	10-19	3	56	130	16	5	—	5	—	—	1	216
	20-29	13	129	156	22	3	2	2	—	—	—	329
	30-39	5	25	14	16	3	1	—	—	—	—	64
	40-49	3	6	1	4	2	—	—	—	—	—	16
	50-59	1	3	5	1	1	2	—	—	—	—	13
	60-69	—	1	1	1	1	—	—	—	—	—	4
	70-79	1	1	3	—	—	—	—	—	—	1	6
	80-89	1	1	—	—	—	—	—	—	—	—	2
	90 and upwards	1	1	—	1	—	—	—	—	—	3	6
Total		31	229	321	69	16	6	7	2	—	6	687

Of the 8,146 metropolitan primary school children examined 432 had hearing defects as compared with 176 of the 3,024 children in the country. Two thousand seven hundred and twenty-nine High School and Technical School children were tested and defects found in 78. Three hundred and twenty-one children were retested in the office and 368 retested in the schools. Children with hearing defects were advised to obtain medical help.

Other feature.—Heart defects have halved since 1950 and notices for diseased tonsils have been reduced by two thirds.

Communicable diseases.—The number of communicable diseases reported from schools are shown in the Table XIII.

TABLE XIII.—INFECTIONS IN SCHOOL CHILDREN.

Year.	Diphtheria.	Scarlet Fever.	Measles.	Rubella.	Whooping Cough.	Chicken-Pox.	Mumps.	Polio-myelitis.	Infective Hepatitis.
1950	11	169	4,034	74	70	1,180	1,904	219	—
1951	14	160	1,880	761	148	1,398	1,198	364	—
1952	2	128	3,099	452	664	3,144	2,188	123	—
1953	2	84	958	99	236	2,252	1,727	71	—
1954	2	125	3,933	268	162	1,744	1,952	36	—
1955	11	215	1,114	452	264	1,695	2,207	43	93

For comparison, Table XIV, the figures for communicable diseases are shown per 10,000 children attending all State Schools.

TABLE XIV.—INCIDENCE OF INFECTIONS PER 10,000 CHILDREN.

Year.	Diphtheria.	Scarlet Fever.	Measles.	Rubella.	Whooping Cough.	Chicken-Pox.	Mumps.	Polio-myelitis.	Infective Hepatitis.
1950	1.3	18.3	464	8.5	8	136	216	—	—
1951	1.5	16.7	198	80.1	15.6	147	126	—	—
1952	0.2	12.4	300	43.9	64.4	305	212	—	—
1953	0.2	8.4	95.8	9.9	23.6	225.2	172.7	—	—
1954	0.164	10.25	322.4	22	13.3	143.2	160.2	3.0	—
1955	0.8	16.9	87.8	35.6	20.8	133.7	173.5	3.3	7.3

The total number of communicable diseases was 6,205. This is a decrease in the 1954 figures of 8,307 mainly due to the decrease in measles to 1,114 cases. Poliomyelitis cases were slightly higher. There were six cases of meningitis, three of encephalitis, 23 cases of conjunctivitis, and 93 cases of infective hepatitis reported, but none of trachoma or tetanus.

Legs and Feet Survey.—The survey of legs and feet was continued and 34,000 children were examined, 3,270 defects were listed, pes planus and genu valgum occurring most frequently in boys, hallux valgus in girls. The new pointed shoes once more appearing on the market are doubtless causing trouble.

Dental Survey.—Towards the end of the year schools near Karoonda and at Kingscote were visited by two School Dentists and earlier in the year some schools in the mid-north were completed. All children whose parents wished them to have dental treatment were made dentally fit. The following work was done :—

TABLE XV.

Number of children treated	445
Extractions—	
Permanent	181
Deciduous	802
983 Average per child 2.2	
Fillings—	
Permanent	1,897
Deciduous	425
2,322 Average per child 5.2	

Twelve thousand eight hundred and ninety-six children at various schools in the metropolitan area were examined by the Senior Dentist and of these children 6,042 had defect notices. The remainder were dentally sound or under the care of a dentist, and are not included in the statistics. This explains the apparent great reduction in dental caries, found by both the dentists and medical officers, which is not in fact the case, although the general care of the teeth has recently improved. Deciduous teeth are now much more frequently filled than previously.

At the request of the Advisory Council on Health and Medical Services a School Dentist was sent to Naracoorte and Mount Gambier to investigate the incidence of decay at the schools in those districts, as Naracoorte water has a high fluoride content, and it was hoped some definite information might be obtained. However, as a very small minority of families use the Naracoorte water—they prefer the rain water—no figures of any statistical significance could be obtained.

School dentists are requested to give talks and show films to Parents' Meetings from time to time. It is hoped that much greater use may be made of this method of instruction to the parents.

Medical Examinations of Student-Teachers.—Five hundred and eighty-two female and 254 male students entering and leaving the Teachers College or attending State Schools as probationary students were examined medically in 1955 at the office, also all female teachers returning to work after sick leave who were referred by the Education Department, and all female applicants for invalidity pensions. It was arranged during the year that all temporary teachers, who are within reasonable distance of Adelaide, should also be medically examined. In the middle of the year 100 temporary teachers were appointed, 50 of whom were seen by a medical officer.

Lectures in Hygiene.—One lecture a week in Hygiene was also given to the temporary teachers, as well as the usual Hygiene lectures to students at the College. The Principal Medical Officer was assisted in this by a Medical Officer taking one of the groups.

Health Education.—Twenty-one Mothers' Clubs were addressed during the year. There is a very large field here for useful education in health. Visual aids could be of great use here; in the future it is expected that the clubs and teachers will make more use of them.

8. GENERAL SANITATION.

Administration.—The staff of the Department was increased by the appointment of two additional inspectors under the Health Act and the Food and Drugs Act, to fill two positions created during 1954. This has allowed for improved inspection and supervision of local board areas and increased assistance to local boards and their officers by the Department of Public Health.

Local boards appear to have given more attention to the health of their areas. Many have employed qualified health inspectors and a few now have full-time inspectors. This increased activity has undoubtedly improved the sanitation of the State and will ultimately result in a more healthy State.

Inspections.—Routine general inspections were carried out by officers of the Department. In addition many special inspections and investigations were done. Brief reports on a few of these are given in the following paragraphs. A total of 56 routine inspections were done in local board areas by inspectors of the Department.

Slaughterhouses.—During and after the recent Abattoirs strike a survey of slaughterhouses situated within a radius of 30 miles of Adelaide was made by inspectors of the Central Board of Health. In 17 cases of breaches of the Health Act and Regulations the Board recommended that the local boards concerned take proceedings against the offenders.

Of the 35 licensed slaughterhouses in the area surveyed only three were found to be structurally satisfactory: five require to be completely rebuilt; 21 require major alterations and five minor alterations, and one was under construction. The conduct of slaughtering and the sanitation of the premises generally was found to be poor with carcasses subjected to contamination, and extensive fly breeding taking place at most of them. At many slaughterhouses no provision was made for hanging carcasses in flyproof rooms. Even where provided they were generally found to be structurally defective, inadequate and unclean. The Central Board of Health has written to the local boards concerned urging action to have the unsatisfactory slaughterhouses brought up to standard requirements before the next period of licensing.

Parndana, Kangaroo Island.—An inspection was made of the sanitary arrangements at the soldier settlement of Parndana. The new homesteads have been installed with modified septic closets. These are designed to deal with sullage water as well as nightsoil. The scheme is working very well in the case of isolated farm houses where the natural fall of the land has been utilised in the disposal of effluent and surplus rain water. Caution has to be exercised in built-up areas. At the new township there is no natural land fall and the soil which consists of iron stone and clay is non-absorbent. This has set a problem in sanitary engineering. In the siting of townships where deep-drainage is impracticable, the natural land fall and absorbent qualities of the soil itself are important considerations.

Pollution of underground water supplies in South Australia.—In South Australia the South Australian Department of Mines does the majority of boring for water supplies and drainage purposes and has recently been concerned about the possibility of drainage bores causing pollution of underground water supplies. The Deputy Director of Mines convened a conference on 20th September, of representatives from interested Departments to discuss the problem. The Senior Medical Officer attended and said that it was a principle of public health practice that pollution of water supplies should be avoided. These include underground supplies. It was, however, not always possible to apply this principle in practice. All water supplies should therefore be supervised and checked, and when necessary made safe for human consumption.

The practice of regularly testing water supplies from bores that are near drainage bores has now been adopted in a number of places. The results so far have indicated that pollution is not occurring in those bores. Water supplies controlled by the Engineering and Water Supply Department are, of course, periodically tested for pollution.

Eyre Peninsula Local Government Conference.—This was held at Streaky Bay in March. It was attended by representatives of all the Local Government bodies in the area and by State and Federal members of Parliament representing the area. The usual deliberations took place. Dr. Deland addressed the meeting on the Department's work and stressed the bearing of future projects on the health of the area.

Visits to Northern Areas.—During the year the Medical Officer for the Northern Districts (Dr. Deland) visited many centres and stations in the outback. He was accompanied by various inspectors, and on one occasion by Dr. J. E. McCartney, of the Institute of Medical and Veterinary Science. An understanding of sanitary and medical problems in the outback has been expanded, and much advice and help given.

9. FOOD AND DRUGS.

Testing of samples.—Table XVI shows the results of analyses of samples of food and drugs submitted to the Government Analyst.

TABLE XVI.—RESULTS OF ANALYSES OF FOODS AND DRUGS FOR 1955.

Article.	Number submitted.	Not to standard or incorrectly labelled.
Apricot nectar	1	—
Beer.....	3	—
Biscuits	8	—
Bread	29	9
Butter	2	—
Confectionery.....	6	1
Cordial extract	7	1
Cream	1	1
Frozen confectionery	11	—
Lard Compound	2	—
Meat	44	26
Milk	1,107	44
Pickles	1	1
Pineapple Juice	3	—
Potatoes	3	—
Powdered soup	6	1
S. R. Flour	1	1
Temperance drinks	9	—
Tinned fish	4	3
Tinned foods	8	5
Tomato products.....	24	7
Tooth paste	1	—
Wrapping paper	4	—

Food colours.—The list of permitted artificial colours for use in foods was amended in accordance with the recommendations of the Food Additives Committee of the National Health and Medical Research Council: a period of 12 months has been allowed during which stocks of the old colours may be used.

Sodium fluoroacetate.—The Board has agreed to the issue of permits to bona fide primary producers to authorise them to purchase a prepared bait poisoned with sodium fluoroacetate for the purpose of rabbit destruction. The factory-prepared bait removes some of the hazards in handling this poison and it has been found to be as effective in rabbit control as baits freshly prepared in the field.

Reconstituted Milk.—The Food and Drugs Regulations were amended to provide a standard for reconstituted milk and for the issue of permits. It has been necessary to define the standard because of the growing demand for such milk in isolated areas to which the transport of fresh milk is not practicable.

Organic Phosphate Poisons.—The sale and use of the systemic organic phosphate poisons used as insecticides was prohibited by Regulations under the Food and Drugs Act. It had been proposed to use the poisons on vegetables and there was not at the time a practical method of estimating residues.

Coumarin.—Following a recommendation of the Food Additives Committee of the National Health and Medical Research Council the use of coumarin as a flavouring substance in food was prohibited. The recommendation followed overseas reports of the toxicity of coumarin.

Smallgoods.—The Food and Drugs Regulations were amended to provide for the high fat content of smallgoods prepared to continental recipes. The fat content of these smallgoods is normally higher than the 30 per cent permitted in the case of raw sausage, saveloy, etc.

Opium poppy.—One report of the cultivation of the opium poppy came under notice.

10. INDUSTRIAL HYGIENE.

Administration.—Industrial hygiene problems referred to the Department have been investigated and where necessary recommendations made for the improvement in existing conditions. The assistance of the Factories and Steam Boilers Department, the Department of Mines, the Department of Chemistry, and the Institute of Medical and Veterinary Science has been of value and is appreciated.

Department of Mines Uranium Project.—Pre-employment and annual periodic medical examinations of persons employed on the uranium project of the Department of Mines were continued. During the year 415 medical examinations were done. Clinical examinations have been done by medical officers of the Department of Public Health. Periodic X-ray examinations have been done at Radium Hill and Adelaide by the Mobile X-ray units of the Department of Public Health; blood examinations at Adelaide, Port Pirie and Radium Hill have been done by the mobile unit of the Institute of Medical and Veterinary Science. Medical examinations, required by the Silicosis Committee, of employees of the Department of Mines working in places where there is a silicosis hazard are also done.

Lead poisoning.—Conditions in a factory where two employees developed signs and symptoms of lead poisoning were investigated. Ten employees were exposed to air which on examination contained up to 3.14 mgm. of lead per cubic metre. The concentration of lead in the urine of these men was many times that of normal urine. The highest value found was 0.43 mgm. per litre. There was also evidence in their blood of damage similar to that produced by the excessive absorption of lead. The “frit” used for enamelling in this factory contained 18.6 per cent of lead.

It was recommended that action be taken by the Factories and Steam Boilers Department to have the lead content of the air reduced to 0.15 mgm. per cubic metre. Quarterly medical examinations of the employees exposed was also recommended. Subsequent inspections showed an improvement in the general condition in the factory and a reduction of the lead in the air to a safe amount.

Health hazards associated with the bulk handling of wheat.—The introduction of bulk handling of wheat in South Australia has drawn attention to the health hazards associated with this work. Investigations of the dust produced has shown that it may contain sharp pointed hairs from the ends of the wheat grains, fragments of vegetable and mineral matter, moulds and spores. A person unaccustomed to wheat dust usually experiences signs and symptoms of irritation of the upper respiratory tract after breathing air containing the dust. Sneezing, coughing, and a burning sensation in the chest may occur, followed by asthma and other allergic conditions from sensitisation to proteins and moulds in the dust. Acute and chronic inflammatory changes may result from mechanical damage to the delicate linings of the respiratory tract by fine hairs and mineral particles in the dust. Skin irritation may also be caused.

Other hazards are explosion of the dust, suffocation following accidental burying in the grain, and asphyxiation from breathing oxygen-deficient air often found above closed wheat storage bins. The hazards should be considered in the siting and construction of bins for bulk wheat and means taken to prevent dust during filling and emptying bins. The authorities concerned with bulk handling have been informed.

Medical Examinations for Employment.—Medical examinations of applicants for permanent appointments in the Public Service and Education Department are done by medical officers of the Department of Public Health. In addition, medical examinations of all persons except railway employees desiring to subscribe to the S.A. Superannuation Fund or in receipt of invalid pensions from the Fund are done by medical officers of the Department. There were 1,728 examinations during 1955.

11. SUMMARY AND COMMENTS.

Staff.—New and increased staff during 1955 assisted in consolidating the work of the Department. Though vacancies existed at the end of the year for medical officers and dentists, the staff of inspectors was brought to full strength. The work of the Department and the Board was facilitated by the enthusiasm and wholehearted co-operation of members of the staff of the Department.

Conference.—Much preparation was put into the Public Health Conference by the Department's officers. The attendance and interest taken in the papers and discussions indicated the value of the Conference as a means of health publicity. The Board appreciates the generous work of the contributors to the programme.

Medico-Social Surveys.—Much valuable information has been collected from surveys of home nursing and home helps, child minding establishments, nursery schools and kindergartens. Reports on those subjects are under consideration.

Reportable diseases.—Alterations made in 1954 in the lists of diseases required to be reported to local health authorities were introduced at the beginning of 1955. The inclusion of infective hepatitis has drawn attention to its high incidence.

Poliomyelitis.—The extensive epidemic of poliomyelitis has subsided. The incidence in 1955 (182 cases, 6 deaths) was almost identical with that in 1954 (176 cases, 5 deaths). Use of a vaccine overseas to control this disease has been successful; it is anticipated that the use of similar vaccine in Australia will be similarly effective.

Immunization.—The increased incidence of diphtheria (26 cases, three deaths, compared with five cases, no deaths in 1954) is a painful reminder that immunization must be steadily continued. In many districts enthusiasm for immunization appears to have diminished. This attitude is a potential danger, as there are still sufficient diphtheria carriers to initiate an epidemic in a non-immune community.

Slaughterhouses.—A comprehensive survey of licensed slaughterhouses within 30 miles of Adelaide revealed many unsatisfactory conditions. Special attention is being given to improving them.

Special Sections.—The work of the Department in the Schools, in the control of tuberculosis and poliomyelitis, and in industrial establishments is referred to in special sections of the report. In the branches, work has progressed satisfactorily and some gratifying results have been produced.

Co-operation of other Departments.—The assistance readily given by other Departments, both Commonwealth and State, the Institute of Medical and Veterinary Science, and numerous other organizations and individuals during the year under review is appreciated by the Department and the Board.

A. R. SOUTHWOOD, Chairman.

J. B. CLELAND

G. H. McQUEEN

A. R. BURNELL

A. BERTRAM COX

} Members.

H. T. HUTCHINS, Secretary,

Adelaide, April, 1956.